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UIT Support Observations Archive

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We are in the process of archiving the ~1.2Tbytes of imaging data we have acquired in support of UIT observations. The UIT is one of three telescopes comprising the ASTRO spacecraft and is a 38-cm f/9 Ritchey-Chretien telescope with wavelength coverage 1200A to 3000A and a 40 arcminute diameter field-of-view at 4" FWHM resolution. During the ASTRO shuttle mission there were 65 different pointings (some with multiple targets) of the UIT and hence 65 fields. Our support data of these fields were obtained with the KPNO and CTIO 0.9m telescopes and several of the 2048 x2048 CCDs. Our images are typically about 20 arcminutes on a side and contain the entire UV target except for nearby galaxies, for which we have created mosaiced images. We are archiving all good quality images in the broadband and narrow band filters for every target. Though all of the UIT targets were well studied astronomical objects, these frames are many of the first large field format images of them and, when combined with the soon to be released UV frames, provide a unique dataset.

These data have already been used to address a wide variety of astronomical questions. Vacuum ultraviolet (VUV) observations were used to study star formation in a sample of nearby galaxies, since integrated VUV - optical colors provide the most sensitive available measure of the formation rate of massive stars. The blue stages later in stellar evolution are also being studied. These data allow more accurate determination of the helium and metallicities of hothorizontal branch stars. (See the August 10 issue of the *Astrophysical Journal Letters*.) We are preparing to release these data to the public in CD-ROM format through the National Space Science Data Center.